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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/611,769	07/01/2003	Dimitri Peter Zafiroglu	SWZ-007	2175
29626	7590	12/07/2007	EXAMINER	
THE H.T. THAN LAW GROUP WATERFRONT CENTER SUITE 560 1010 WISCONSIN AVENUE NW WASHINGTON, DC 20007				MATZEK, MATTHEW D
ART UNIT		PAPER NUMBER		
1794				
MAIL DATE		DELIVERY MODE		
12/07/2007		PAPER		

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

<b>Office Action Summary</b>	<b>Application No.</b>	<b>Applicant(s)</b>	
	10/611,769	ZAFIROGLU, DIMITRI PETER	
	<b>Examiner</b>	<b>Art Unit</b>	
	MATTHEW D. MATZEK	1794	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

#### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

1) Responsive to communication(s) filed on 01 October 2007.

2a) This action is **FINAL**.                            2b) This action is non-final.

3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

4) Claim(s) 2,3,6-9,11-13,15,23-25,56-64,66,68-72,74-80,82-87 and 89-91 is/are pending in the application.

4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.

5) Claim(s) \_\_\_\_\_ is/are allowed.

6) Claim(s) 2, 3, 6-9, 11-13, 15, 23-25, 56-64, 66 and 68-72, 74-80, 82-87 and 89-91 is/are rejected.

7) Claim(s) \_\_\_\_\_ is/are objected to.

8) Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

9) The specification is objected to by the Examiner.

10) The drawing(s) filed on 7/1/2003 is/are: a) accepted or b) objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a) All    b) Some \* c) None of:

1. Certified copies of the priority documents have been received.
2. Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

1) Notice of References Cited (PTO-892)

2) Notice of Draftsperson's Patent Drawing Review (PTO-948)

3) Information Disclosure Statement(s) (PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_.

4) Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_.

5) Notice of Informal Patent Application

6) Other: \_\_\_\_\_.

***Response to Amendment***

1. The amendment dated 10/1/2007 has been fully considered and entered into the Record. The amended claims contain no new matter. Claims 2, 3, 6-9, 11-13, 15, 23-25, 56-64, 66 and 68-72, 74-80, 82-87 and 89-91 are currently active. The previous rejections based upon Ladeur have been withdrawn as the applied art fails to teach or suggest needle-punching fibers through the adhesive layer to the backing layer or an adhesive layer that is at least partially bonded to the backing layer.

***Claim Rejections - 35 USC § 102***

The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

2. Claims 23, 56, 58, 59, 61, 66, 68-70, 78, 82, 85 and 89 are rejected under 35 U.S.C. 102(b) as being anticipated by Sidles (US 4,888,228).

Sidles discloses a composite laminate comprising matrix bound plies having interlocked transverse fibers. Examiner equates the claimed fibrous face layer to Sidles' woven substrate (**24, 26**) and the claimed solid adhesive to the resin below said woven substrate as illustrated in Figure 2. The needle-punched nonwoven fabric with legs extending away from the top surface of the fibrous face layer and through the bottom surface of the fibrous face layer are represented by **30, 32, 34**. The adhesive layer is thermally set and at least partially penetrates into the fibrous face layer (col. 1, lines 40-49). Figure 3 illustrates that a plurality of plies may be stacked and the fibers of opposing plies are aligned so that through the curing process they become bonded to one another (col. 4, lines 50-62). The lower ply **20** illustrated in Figure 3 serves as the claimed backing layer.

Claim 59 is rejected as the fibrous face layer comprises a cut woven layer (34 of Figure 2). Claim 82 is rejected as the composite takes form with the application of heat and pressure; therefore, it is necessarily also embossable. The figures of Sidles illustrate the top portion of the fibrous face layer as being embedded in polymeric adhesive. However, Sidles teaches that only at least one side needs to be coated with binder and that when a plurality of the plies are stacked together there is binder between layers. Therefore, the top portion of the fibrous face layer may be substantially free of adhesive. The woven substrate may be replaced with knit or nonwoven fabrics. The substrate layer may be made of polyester, nylon and aramid fibers (col. 3, lines 5-57).

***Claim Rejections - 35 USC § 103***

The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

3. Claims 64 and 91 are rejected under 35 U.S.C. 103(a) as being unpatentable over Sidles (US 4,888,228).

Sidles fails to explicitly disclose the depth in which the adhesive layer penetrates the fibrous face layer. The relative depth in which the adhesive layer penetrates the fibrous face is a result-effective variable affecting the strength of the composite (col. 3, lines 14-45). Consequently, absent a clear and convincing showing of unexpected results demonstrating the criticality of the impregnation depth, it would have been obvious to one of ordinary skill in the art to optimize this result-effective variable by routine experimentation. *In re Antonie*, 559 F.2d 618, 195 USPQ 6 (CCPA 1977).

4. Claims 8, 9, 57, 60, 62, 74, 76 and 77 are rejected under 35 U.S.C. 103(a) as being unpatentable over Sidles (US 4,888,228) as applied to claims 56, 58, 59 and 64 above, and further in view of Ladeur (EP 0 547 533). Sidles fails to teach or suggest the use of gathered fabrics in the fibrous face layer.

a. Ladeur teach a floor covering comprising a base fabric **1** (fibrous face layer) and pile fibers **2** that make up a face layer with a plurality of legs dependent said face layer (Abstract and Figures). The base or ground fabric **1** may be a nonwoven fabric. Said nonwoven may stitch-bonded or melt-blown and the nonwoven may be gathered (consolidated) (page 6). The tufted pile may be in the form of closed loops or as trimmed nap (page 8). The pile and nonwoven layers represent the claimed fibrous face layer. Below the face layer is an adhesive layer **3**. Applicant requires a solid adhesive film or fabric. Examiner takes the position that the adhesive layer of Ladeur serves as a film and that the final product has a solid adhesive layer and as such meets the claimed solid adhesive film or fabric. The pile is needled through the face layer (claim 1) and has downwardly facing fiber loops with free fiber ends that extend into the adhesive layer. The gathered fabrics of Ladeur provide for the undulated gathers of claim 57. It is highly desirable that the adhesive used to bind the facing and backing layers along with said layers are all of the same type of polymers so that the article remains recyclable (page 5). The consolidated fabric may be stitch-bonded with shrinkable yarns (page 6).

b. Since Sidles and Ladeur are from the same field of endeavor (i.e. fabric composites), the purpose disclosed by Ladeur would have been recognized in the pertinent art of Sidles.

c. It would have been obvious at the time the invention was made to a person having ordinary skill in the art to modify the invention of Sidles with the fabric of Ladeur motivated by the desire to form a structurally reinforced composite as disclosed by Ladeur.

5. Claims 2, 3, 6, 7, 63, 71, 72, 75, 79, 80, 83, 84, 86, 87 and 90 are rejected under 35 U.S.C. 103(a) as being unpatentable over Sidles (US 4,888,228) as applied to claims 56, 58, 59 and 64 above, and further in view of Sissons (US 3,347,736). Sidles fails to teach or suggest a specific needling density.

a. Sissons teaches a reinforced needled pile fabric with a reinforcing woven fabric within the pile layer (col. 3, lines 35-44). Example 5 uses fibers with a denier of 3. Example 1 uses a needling density of 600 punches per square inch. Sissons uses fabric face layers that range from 6-15 ounces per square yard (203-509 gsm) a thickness of half an inch (col. 8, lines 8-15).

b. Since Sidles and Sisson are from the same field of endeavor (i.e. fabric composites), the purpose disclosed by Sisson would have been recognized in the pertinent art of Sidles.

c. It would have been obvious to one ordinary skill in the art at the time the invention was made to have looked to the prior art to suggest a needling density that would yield a successful needled fabric composite.

6. Claims 11, 12 and 15 are rejected under 35 U.S.C. 103(a) as being unpatentable over Sidles (US 4,888,228) and Ladeur (EP 0 547 533) as applied to claim 57 above, and

further in view of Zafiroglu et al. (US 6,269,759). The disclosures of Sidles and Ladeur are silent as to the stitch-bonded and bulked fabrics in the fibrous outer layer.

- a. Zafiroglu et al. teach the creation of pile fiber carpet using stitch-bonded and bulked fabrics with a loop frequency of 12 per inch (Example 1). The stitches may be arranged to create various patterns or surface effects (col. 13, lines 1-5). The illustrated loops of Figure 5c read on the “gathered fabric” limitations as they appear to be structurally similar.
- b. Since Sidles and Zafiroglu et al. are from the same field of endeavor (i.e. fabric composites), the purpose disclosed by Zafiroglu et al. would have been recognized in the pertinent art of Sidles.
- c. It would have been obvious at the time the invention was made to a person having ordinary skill in the art to modify the article Sidles with the fabrics of Zafiroglu et al. motivated by the creation of an aesthetically pleasing article.

7. Claim 13 is rejected under 35 U.S.C. 103(a) as being unpatentable over Sidles (US 4,888,228), Ladeur (EP 0 547 533) and Zafiroglu et al. (US 6,269,759) as applied to claim 12 above, and further in view of Murata et al. (US 4,576,840). The disclosures of Sidles, Ladeur and Zafiroglu et al. are silent as to the stitch-bonded and bulked fabrics in the fibrous outer layer.

- a. Murata et al. teach a pile fiber composition comprising shrinkable pile fibers in the creation of a woven or knitted pile fabric.
- b. Since Sidles and Murata et al. are from the same field of endeavor (i.e. fabric composites), the purpose disclosed by Murata et al. would have been recognized in the pertinent art of Sidles.

c. It would have obvious at the time the invention was made to a person having ordinary skill in the art to modify the article Sidles with a woven or knitted carpet of shrinkable fibers motivated by the use of conventional techniques within carpet making with the desire to create an article with outstanding appearance and feel (Murata et al. Abstract).

8. Claims 24 and 25 are rejected under 35 U.S.C. 103(a) as being unpatentable over Sidles (US 4,888,228) as applied to claim 56 above, and further in view of Allison et al. (US 2003/0099810). Sidles fails to teach or suggest the use of a spunlaced fabric for the fabric layer, through which the fabric is needled.

a. Allison et al. teach the creation of carpeting for vehicles that comprises a primary layer **12** that may be a spunlaced fabric [0024].

b. Since Sidles and Allison et al. are from the same field of endeavor (i.e. fabric composites), the purpose disclosed by Allison et al. would have been recognized in the pertinent art of Sidles.

c. It would have been obvious at the time the invention was made to a person having ordinary skill in the art to have made the article of Sidles with the spunlaced fabric layer of Allison et al. The skilled artisan would have been motivated by the desire to create an article with added stability provided by the spunlaced fabric.

#### ***Response to Arguments***

9. Applicant's arguments with respect to claims 2, 3, 6-9, 11-13, 15, 23-25, 56-64, 66 and 68-72, 74-80, 82-87 and 89-91 have been considered but are moot in view of the new ground(s) of rejection.

***Conclusion***

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to MATTHEW D. MATZEK whose telephone number is (571)272-2423. The examiner can normally be reached on M-F, 9-5:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Terrel Morris can be reached on 571.272.1478. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Matthew D Matzek/  
Examiner, Art Unit 1794

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